

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
18 November 2021 (18.11.2021)



(10) International Publication Number
WO 2021/231505 A1

(51) International Patent Classification:

A61K 35/17 (2015.01) *C07K 19/00* (2006.01)
A61K 39/00 (2006.01) *C12N 5/10* (2006.01)
C07K 16/28 (2006.01) *C12N 7/00* (2006.01)

UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(21) International Application Number:

PCT/US2021/031878

(22) International Filing Date:

11 May 2021 (11.05.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/023,191 11 May 2020 (11.05.2020) US
63/133,224 31 December 2020 (31.12.2020) US

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))
- with sequence listing part of description (Rule 5.2(a))

(71) Applicant: **ABINTUS BIO, INC.** [US/US]; 10355 Science Center Drive, Suite 250, San Diego, CA 92121 (US).

(72) Inventors: **JOLLY, Douglas J.**; 382 Sunset Drive, Encinitas, CA 92024 (US). **OSTERTAG, Derek G.**; 6156 Blue Dawn Trail, San Diego, CA 92130 (US). **KASAHARA, Noriyuki**; 35 Andrew Drive, Apt. 143, Belvedere Tiburon, CA 94920 (US). **IBANEZ, Carlos**; 13592 Millpond Way, San Diego, CA 92129 (US). **BENTLEY, Cornelia A.**; 4359 Robbins Street, San Diego, CA 92122 (US). **HUSAIN, Mohd Mushtaq**; 390 Via Mil Cumbres, Unit 138, Solana Beach, CA 92075 (US).

(74) Agent: **BAKER, Joseph R. Jr.**; Gavrilovich, Dodd & Lindsey, LLP, 4370 La Jolla Village Drive, Suite 303, San Diego, California 92122 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,

(54) Title: VECTORS AND METHODS FOR IN VIVO TRANSDUCTION

LTR	anti-BCMA CAR	Kill Switch-CD or TK	miR de-targeting	Optional immune modulators	LTR
-----	---------------	----------------------	------------------	----------------------------	-----

FIG. 11

(57) Abstract: The disclosure provides compositions and methods for inducing an immunity via cellular expression of an antigen receptor binding construct *in vivo*.



WO 2021/231505 A1